

E X T R A C T S
FROM THE
R E P O R T S
OF THE
ROYAL HUMANE SOCIETY;
WITH
CERTIFICATES, LETTERS, &c.
WHICH FULLY EVINCE THE UTILITY OF
AN AIR MACHINE,
OR
PATENT VENTILATOR;
INVENTED AND SOLD BY
WILLIAM WHITE,
OF GARLICK HILL, LONDON.

PRINTED IN THE YEAR M,DCC,XCIV.



By His Majesty's Royal Letters Patent.

An AIR MACHINE.

HIS MAJESTY has been graciously pleased to grant unto WILLIAM WHITE, of GARLICK HILL, LONDON, TALLOW CHANDLER, Royal Letters Patent, for his invention of the above Machine.

The Machine is so constructed, that it will occupy a very small space, and will have the appearance of a very ornamental piece of furniture in any ROOM or CABIN.

In the WARMEST SEASONS, and the MOST SULTRY CLIMATES, it will infallibly afford COOL, REFRESHING AIR, a luxury, of all others, the most to be desired; and it has this additional excellence and peculiarity, that the QUANTITY of AIR, and the DEGREE of COLD, may be INCREASED or DIMINISHED at pleasure, and regulated so as to answer a great variety of purposes.

The utility of the Machine, therefore, to GENTLEMEN of the NAVY, and others, who either occasionally visit, or constantly reside in WARM CLIMATES, is too manifest to need observation; and the Patentee can, with confidence, recommend it as an ARTICLE of TRAFFIC, highly worthy the attention of MERCHANTS, and others, trading to such climates.

In SHIPS, MINES, HOSPITALS, and PRISONS, its efficacy in EXPELLING FOUL, and SUPPLYING COOL, FRESH AIR, will be found infinitely superior to that of any other machine ever yet invented; the power of it, in those respects, being so great, that a room fifty feet long, twenty feet wide, and ten feet high, may, by its operation, either be filled with wholesome, or emptied of unwholesome air, in a few minutes.

It may be used to PREVENT DISEASES in SHIPS; for, by the application of tubes, and without any danger of fire, with the easy labour of one man only, it will, in fifteen minutes, completely SMOKE in every part, a ship of any burthen.

In the HOLDS of SHIPS, this machine will be found very serviceable for keeping COOL the STORES and MERCHANDIZE, as it will throw in 60,000 gallons of COOL AIR a minute.

NOBLEMEN

NOBLEMEN and GENTLEMEN will find its excellence in the application of it to their WINES and FRUIT, which it will cool to any degree, without any of the pernicious consequences which too frequently attend the injudicious use of ice.

TRADESMEN and MANUFACTURERS will experience its utility in instances too various to be enumerated.

The CONSTRUCTION of it is so SIMPLE, that it WILL NOT NEED REPAIR for many years; and its OPERATION so EASY, that a boy may work it.

The Machines are constructed of DIFFERENT SIZES, and may be had at the annexed prices, of the PATENTEE, at No. 27, GARLICK HILL, Bottom of BOW LANE, CHEAPSIDE, LONDON.

The Reverend Mr. RENNIE, Vicar of LONG ICHINGTON, in the County of WARWICK, who resided several years in AMERICA and the WEST INDIES, having examined the Machine, has favoured the Patentee with the following remarks : —“ By means of this Machine, a CONTINUAL STREAM of “ FRESH AIR may be conveyed into every room of a house at “ the VERY SAME INSTANT of TIME. In this view of it, “ the Machine will prove a MOST VALUABLE ACQUISITION “ to the INHABITANTS of WARM CLIMATES, by its POWER “ of EXPELLING the FOUL STAGNATED AIR from their “ APARTMENTS, and supplying them with a sufficient quantity of this FLUID, in a COOL, REFRESHING STATE, “ even in the HOTTEST and MOST SULTRY WEATHER. “ And if it be further considered, that the AIR, so introduced, may be IMPREGNATED with some kind of SCENT “ or PERFUME, which, at the same time that it is pleasing, “ or at least inoffensive, to the inhabitants themselves, will “ effectually ANNOY and PUT TO FLIGHT their truly troublesome and unwelcome guests, the MUSQUITOS, and other “ INSECTS, it may be justly allowed to present to the PEOPLE inhabiting our EAST and WEST INDIES, a SOURCE of “ HEALTH and COMFORT, of all others the most desirable, “ and to which they have hitherto been strangers.”



PRICES

(7 D)

P R I C E S

WHITE'S AIR MACHINES.

[—————]

FEET. INCHES.	GUINEAS
4 — 2 DIAMETER	36
3 — 10	33
3 — 6	30
3 — 2	27
2 — 10	24
2 — 6	21
2 — 2	18
1 — 10	15

They are sold for READY MONEY ONLY.

N.B. Machines of three feet diameter, made of oak and deal, for MINES, twenty guineas each.

A 4

To

To evince the Utility of the AIR MACHINE, the Proprietor begs Leave to submit to the Public the following Extracts from the REPORTS of the ROYAL HUMANE SOCIETY, for the Years 1787,—8,—9.

P R E S E R V A T I O N
O F T H E
L I V E S O F C O A L - M I N E R S,

And others who may be exposed to inflammable and noxious Airs.

In the Gentleman's Magazine for July, 1789, appeared the following letter, breathing the genuine spirit of philanthropy. The sentiments of A. B. have been productive of the most beneficial effects to the Public, as they have stimulated further inquiries into the consequences of inflammable and other suffocating and noxious vapours; and have tended still further to illustrate the subject of suspended animation.

Mr. URBAN,

July 2.

In the neighbourhood within which I am situated, are many coal-mines, where the frequent and heavy disasters befalling the poor miners, from the explosion of inflammable air, have very often excited my



my compassion, together with my earnest wishes that some means could be devised for their prevention. Unequal to the task myself, I have with this view looked into the modern writers on Air, from the high character of whose discoveries I entertained hopes, which, I am sorry to say, in this instance have been by no means gratified. *Dr. Berkenhout* indeed mentions this air as having been long known to exist in coal-mines, where it frequently kills the miners, who call it the fire-damp, but does not hint at any method of obviating such effects. *Dr. Priestly* also says, that it takes place near the roofs of subterraneous places, and is liable to take fire and explode like gunpowder; that it is produced from charcoal, and that it may likewise be procured from pit-coal without being charred. This last observation of the Doctor's is so true, that though the air is not equally to be met with in all veins of coal, yet in many it is found in such abundance, that they may be considered as the chief matrix of inflammable air as a natural production: for when any of the veins of coal, distinguished by the name of firing veins, are opened, the confined air is continually rushing out, in sounds similar to, and as various as, those produced by the harp of *Æolus*, every bubble of which, by the application of flame, will immediately take fire. As the work is further carried on, this air continues to issue from the coal, and that in such quantities as to fill, by its specific lightness, the upper part of the

lane in which the coal is digging, to a considerable depth, and great length. Under this, at the bottom of the lane, the miners work in good common air; but if, by any accident, the least portion of the inflammable air comes into contact with the flame of their candle, the whole is instantly on fire, and explodes with greater or less violence, according to the several circumstances and situation of the mine. The consequences are well known; many workmen, labouring in the mines which produce this air, having been killed by its explosion, and others, who have escaped with life, have suffered long confinement and acute pain, before they are recovered from the effects of the fire. These facts are manifest; but a preventative of such sad effects is hitherto unknown, and a great desideratum in the business of coal-mining. I am not, however, without hopes, that in this age of experiment and inquiry, the good genius of some one will lead him to the fortunate discovery; many things, which heretofore were thought difficult or impossible, being now found to be practicable and easy. Much credit is due to the philosophers and chemists of the present times, for their unwearied attention, minute investigation, and consequent discoveries in many paths of science. To turn the thoughts and abilities of such men to a consideration of this subject is the design of this address; and if any shall be so happy as to find a remedy for so great an evil, he will essentially aid the cause of humanity,

be

be the means of saving many a valuable and useful life, will merit the thanks of the community at large, and the blessings of the workmen who earn bread for themselves and families, in the mines where such air is generated, and where such accidents so often happen.

And it is submitted to the several societies within this kingdom, formed for the laudable purposes of promoting useful knowledge, whether it would not do credit to their institution, to direct the attention and endeavours of philosophical chemists and mechanics to this desirable end, by offering such premiums as they can respectively afford for such discovery.

I am, yours,

A. B.

*Extract of a Letter from the Gentleman's Magazine,
for August, 1789.*

Mr. URBAN,

THE benevolence and humanity which so strongly characterise A. B. must, if I may speak from my own feelings, be highly gratifying to every philanthropic mind. It would give me the greatest pleasure to unite my feeble efforts with his, in saving the lives, and preserving the health, of so valuable a part of the

community as the COAL-MINERS; *omnia consilia nostraque facta ad conservandum vitam dirigenda sunt.* As a proof of the sincerity of my intentions, I enclose you, Sir, *Five Guineas* for an HONORARY GOLD MEDAL, to that gentleman who writes the best and most useful dissertation on the following question, founded on the judicious reflections of A. B.

WHAT ARE THE MOST EFFICACIOUS MEANS OF RESTORING LIFE TO COAL-MINERS, APPARENTLY DEAD BY SUFFOCATION; AND WHAT WILL PREVENT THOSE ACUTE PAINS AND MORBID AFFECTIONS CONSEQUENT ON A LESS VIOLENT EXPLOSION OF THE INFLAMMABLE AIR IN THE COAL-MINES?

REGULATIONS.

It is my wish, *Mr. Urban*, that you, and two physicians, well known to you for their professional abilities, and skill in chemical philosophy, be the adjudicators.

I. Each Dissertation shall be delivered or sent to *Mr. Urban*, at *Mr. Nichols's*, Red Lion Passage, Fleet Street, on or before the first week in May, 1790.

II. With it shall be delivered a sealed packet, with some device on the outside, and within, the author's name and designation.

III. The

III. The same device to be put on the outside of the dissertation, that *Mr. Urban* may know how to address the successful candidate.

P. S. As so interesting a subject was first suggested, so there appears a peculiar propriety in prosecuting it, in the *Gentleman's Magazine*; a publication which has advanced medical, philosophical, and, indeed, every kind of knowledge.

W. H.—W—S.

To Dr. H A W E S.

SIR,

Swansea.

I happened to be present soon after the dreadful accident in this neighbourhood, arising from the destructive effects of the inflammable air upon the unfortunate Colliers, who were, just then, brought up from the works; and I most cheerfully inform you of the extraordinary attention and skill of Mr. Williams, who, I understand, was one of your pupils. The men were brought up under the *strongest appearances of death*; and the names of the persons restored to life are as follow:

T. Sims, restored to his wife and six children.

E. Hopkins, restored to his wife and five children.

W. Rees, restored to his wife and five children.

J. Hughes, restored to his wife and three children.

D. Jones, restored to his wife and four children.

The

The others were also industrious, honest men.

I trouble you with this letter, in hopes that its publication may be the means in future of preserving the lives of mankind. ROBERT MORRIS.

The Editor deems it incumbent to observe, that while the present publication was in the press, his learned friend Dr. Fothergil, V. P. of the Bath Society, for the Encouragement of Arts, Agriculture, &c. informed him of an important invention for the preservation of the lives of so numerous and useful a class of people as the colliers. "The Bath Society have very properly taken notice of Mr. White, of Garlick Hill, patentee of the new invented Air Machine, calculated for expelling foul and stagnant air out of *coal and other mines*, and for a variety of other purposes." This machine is likely to be of the most eminent public utility, and is already in use in many of the coal-mines in the north.

*Extract from the Gentleman's Magazine, for
November, 1789.*

Cbilcompton, Somerset, Nov. 12.

MR. URBAN,

Through your Magazine for July last, I addressed the public on the subject of inflammable air in coal-mines, under the signature of A. B. Being engaged
with

with two other gentlemen (J. Lambert, Esq. of Pen Park, near the city of Bristol, and Mr. John Paget, of Newberry, in the parish of Kilmeridon, Somerset) in a new coal-work, where the veins are highly productive of such air, a preventative of its fatal effect was our united wish, a frequent subject of our deliberation, and the result was the letter of July 2, which I wrote to you.

In the Magazine for August, the subject was taken up by W. H—W—S, who generously offered a premium for the best dissertation on a thesis, and on terms therein specified.

To this, under the signature of A. B. I sent an answer, intimating that I had heard of a Machine not yet made public;* from the description of which I was led to conceive strong hope of success, and which I should endeavour to bring to fair trial, engaging that, in the farther prosecution of this business, your Magazine should be the channel for conveyance of whatever has, or may, come to my knowledge in relation to it. In pursuance of this engagement, I shall now communicate the steps which have been taken, and the result of the experiments which have since been made. Mr. Lambert being in London, saw an advertisement of an Air Machine, of

* I did not then know that Mr. White had a patent, and exhibited his Machine twice a week,

which

which Mr. White, of Garlick Hill, was the inventor and patentee. This excited his attention; and rightly judging, that if it came up to the account given of it by the proprietor, it would effectually apply to the purpose for which we wanted it; he immediately waited on Mr. White, who readily shewed him the Machine, and by working it gave him a high opinion of its powers, in which repeated trials more fully confirmed him. With this he acquainted his partners in the country, and expressed his desire that a skilful collier might be sent to town to see the Machine, and give his opinion as to its application to coal-mines. This was done; and a trusty man, employed as manager in mines liable to take fire, was sent, whose opinion was, that it certainly would be of great service. This, however, was only a matter of opinion; an actual trial in the mine was much to be desired. This being proposed to Mr. White, he willingly assented, and, in consequence, sent down a small Machine,* which he himself followed.

On Monday, the 2d of this instant November, at the new colliery called Goodeaves, in the parish of Babinton, and county of Somerset, forty yards of air-tubes, provincially called slides, or trunks, six inches deep, and eleven wide, were fitted together in a horizontal direction, and the front tube of the

* One of the least size, it being in length only 12 inches.
machine

machine applied to them, when, on its being put in motion, the smoke of Gum Benjamin, melted for the purpose, was, in the space of less than five seconds, forced with impetuosity through their length, and many yards beyond, in the open air. By shifting the machine, smoke applied to the other extremity of the tubes was, with equal velocity, drawn backward through the same length.

To try its power in throwing down a perpendicular pit, it was next applied to a set of air-tubes of the same dimensions, placed in a pit of 8 feet by 7 feet and a half wide, and 44 yards deep. In a very few minutes it was entirely filled with the smoke of Benjamin, from the bottom to the top, which, by shifting the machine as before, was in like manner drawn out; though, from the inconvenient situation of the machine, arising from obstructions round the pit, with not quite the like velocity.

Tuesday the 3d instant, at another colliery, called Bilston's, about half a mile distant from the former, in the same parish of Babington, the following experiment was made: the shaft there is 110 yards perpendicular depth. At 90 yards from the top, a branch or lane, about three feet broad, and as many high, is driven from one side of the shaft, between 80 and 90 yards in length, into a head of coal; but, being full of inflammable air through its whole extent, no work has been done in it for some time past, on
account

account of the danger attending it. In the morning, some skilful workmen were employed to take down and fit up some air-tubes together ; which they were obliged to do in the dark, it being impossible to take in a lighted candle without almost certain destruction. The Machine was then let down ; after which, in order to direct its operations, Mr. White also descended. The event of this experiment was such as most earnestly was to be wished. After working the Machine about ten minutes, the foul inflammable air was entirely forced away through an outlet of the mine, commonly called the air pit, and good wholesome air substituted in its room. At the expiration of that time, an experienced man procured and lighted a candle, which he carried first with caution, but, not any the least danger appearing, he proceeded without hesitation to the extremity of the lane. Two or three more candles were then lighted, all which burnt even and well as in pure atmospherical air, when Mr. White also went to the end of the lane, where he got a piece of coal, and carried it off as a trophy of his victory.

This, Sir, is a plain relation of facts, which, if necessary, will be attested, as to the two first experiments, by a number of witnesses ; and, as to the last, by two under-ground bailiffs, a carpenter, and an engineer, and one other workman, who all attended Mr. White in his subterraneous expedition.

It may not be improper to add, that in each of the above instances, the operation of the Machine lay under great disadvantage, as the tubes employed on the occasion were far from being either air-tight in themselves, or fitted together with exactness.

I cannot conclude without observing, that when I first wrote to you, I little imagined that help was so near at hand. Many centuries have elapsed since coal was first worked in this kingdom, during which period, for want of such a Machine as Mr. White's, or something of equal efficacy, there have been numbers of lives lost, multitudes maimed for life, infinite distresses brought on families, as well as burthens on parishes, and many works given up, to the loss of the adventurers, as well as the proprietors of coal-lands. Various and great are the benefits, which, I think, will accrue from a judicious use of this Machine in coal and other mines. Lives, time, and money will be saved; and without adverting to its utility in ships, hospitals, prisons, and other places, where the air is unavoidably contaminated, or at all considering it as an article of luxury, I most heartily congratulate the public at large, and miners of every denomination in particular, on the fortunate discovery.

Yours, &c.

RICHARD PAGET.

P. S. In Pilkington's View of the present State of Derbyshire, lately published, is the following notice:

“ Inflamm-

" Inflammable air is met with in most of the coal, and some of the lead-mines, in Derbyshire. In driving soughs likewise for relieving the mines from water, the workmen are generally troubled with it, more especially when they pass through beds of shale. Some years ago several persons were killed by an explosion of it in the famous Hilcar sough, near Youlgrave. Nor would it have been possible to have proceeded in the work without sinking shafts at proper distances from each other, and by this means procuring a circulation of air through the subterraneous passage." Vol. I. p. 174.

As Mr. White's Machine will carry, in less than eight minutes, through the whole extent of this celebrated sough or level, (which, in another part of the same book, Vol. I. p. 127, is said already to have cost 20,226l. 12s. 1d. and when finished, will be about two miles,) had it then been applied, the lives which were lost might have been preserved, and a great saving of time and money been made, the use of the machine superceding the necessity of so many shafts for the sole purpose of circulating air.

N. B. The above machine will winnow more corn in four hours, than any machine hitherto invented will in a day.

To Dr. H A W E S.

Dear Sir,

I BEG leave to send you the particulars respecting Mr. White's Air Machine, * which answers a purpose so coincident with the views of the Humane Society, that I cannot help wishing that that respectable body would so far give a sanction to this ingenious and public spirited man, as to vote him their thanks for so very important a discovery; nor can I at the same time refrain from observing, that while philosophers have been disputing about the component principles, and the various properties of air of every species—whilst the Humane Society, with so much laudable zeal, hath been exciting a spirit of inquiry unheard of before amongst medical men, into the effects of these pernicious vapours on the human system, it hath been the good fortune of my friend Mr. White to present them with a machine, simple in its structure, and easy in its application, of which, in regard to every noxious vapour, it may be truly said, “*afflavit et dissipantur.*”

Mr. White did me the favour to explain to me the whole structure of his machine, previous to his making it public.: And, recollecting the many dreadful accidents from the explosion of inflammable air, which have fallen under my own observation at a very early period of life in a part of the kingdom

* See Pages 3, 4, 5, 6 and 7.

where

where coal-mines abound, the importance of the Machine was to me immediately evident; and I must do Mr. White the justice to say, that no sooner did he find it considered by me in this philanthropic point of view, than, regardless of expence, with an enthusiasm equal to your own in the cause of humanity, he hath strained every nerve to render it more completely beneficial to mankind, consoling himself with this idea, that if it should turn out, in a pecuniary sense, disadvantageous, he will have the satisfaction to know, that he will be the happy instrument of preserving numbers of valuable lives. It is upon the strength of this idea that I take the liberty of suggesting the propriety of the Humane Society conferring their most distinguished mark of approbation upon Mr. White. Should my private opinion not be of sufficient weight upon this occasion, the ingenious letter of Dr. Paget, which I have enclosed, will remove every doubt from the minds of the most scrupulous, respecting the salutary operation of the Machine.

I beg leave to subscribe myself, with sincere wishes for the success of the Humane Society,

Dear Sir,

Your obliged and

Very humble servant,

JOHN SHERWEN.

Enfield, Feb. 1790.

LONDON

LONDON COFFEE-HOUSE;
COURT OF DIRECTORS
OF THE
HUMANE SOCIETY,

JOSEPH THOMPSON, Esq. V. P. in the Chair.

Dr. HAWES informed the court of Directors, that he had been acquainted by public and private communication of Dr. R. PAGET, Dr. FOTHERGILL, J. LAMBERT, Esq. Mr. PAGET, and Mr. SHERWEN, of the invention of an Air Machine, by Mr. WHITE, of Garlick Hill, for the destruction of inflammable air in coal-mines, and the various noxious vapours so fatal to the human race.—The certainty with which this Machine effectuated its important end, had rendered it an interesting and deserving object of public attention—and as the preservation of the lives of the people, in whatever manner such a glorious work may be accomplished, must ever merit the sanction, countenance, and support of the Humane Society,

“ Dr. HAWES moved, that the THANKS OF
“ THIS COURT be presented to Mr. WHITE, for
“ his important invention of an Air Machine, which
“ has been experimentally ascertained to be an effective
“ tual destroyer of inflammable air in coal-mines, and
“ other destructive vapours, and, therefore, the certain
“ preservation of mankind.”

This motion was seconded by John Davenport, Esq. and unanimously approved by the numerous and respectable meeting of Governors and Directors.

Extract

Extract from the Bath Journal, November 9, 1789.

We are informed from the first authority, that Mr. White, of Garlick Hill, London, Patentee of the new invented Air Machine, calculated for expelling foul and stagnant air out of coal and other mines, and a variety of other purposes, has lately brought one of his Machines into this county, in order to try and prove its effects; and we have the pleasure to add, that on repeated trials, the same has proved equal to the most sanguine expectations.

BATH SOCIETY,

FOR THE PROMOTION OF

AGRICULTURE, ARTS, MANUFACTURES, AND
COMMERCE.

*At a General Meeting held at the Society's Rooms,
November 10, 1789,*

Sir JOHN DURBIN, Vice President, in the Chair.

Mr. White, Patentee of a Machine for the general extraction of noxious air from mines of all descriptions, from hospitals, holds of ships, &c. and for
for

For the speedy diffusion of fresh air and salutary effluvia, being present by invitation, exhibited the power of his very ingenious and important Machine, to the great satisfaction of the Meeting.

Extract of a Letter from John Lambert, Esq. of Pen Park, near the City of Bristol.

I HAVE at present only to add in favour of the Machine, that the strong one which you sent to Dr. Paget, has been under ground some time, and with the greatest success, in a place where before, from the damp air, no candle would burn, where, from the nature of the ground being broken and rotten, no air-course could be made to take off the foul air; which inconvenience, I understand, is entirely removed by the Machine, and the work regularly proceeded in.

Thursday, May 13, 1790.

B

To

TO

CAPTAINS AND OWNERS OF SHIPS,
AND TO
PROPRIETORS OF MINES OF EVERY
DENOMINATION.

The following CERTIFICATE fully evinces the great utility of the newly invented AIR MACHINE, by WILLIAM WHITE, No. 27, Garlick-Hill, bottom of Bow-Lane, Cheapside, London.

“ THESE are to certify, that Mr. WHITE, of Garlick-Hill, PATENTEE, tried a Machine for extracting of foul Air, and introducing fresh Air, on board His Majesty's ship under my command.

“ And he having left the said Machine some time for further trial, I am of opinion, with the concurrence of the officers whose names are hereunto subjoined, that it will extract the foul Air much better than the Ventilators now in use, and has the advantage of throwing in fresh Air alternately.

“ And that it would be particularly useful in bad weather, when the ports are barred up, and hatches battened down, while putrid, confined air, is generated for want of circulation, which will in some degree be
the

the ease in this ship in cold, damp, wet weather; besides these properties, it is convenient for smoking ships, in a few minutes, with ease and safety.

“The machine is simple, easily managed and kept in repair.

“Dated on board his Majesty's Ship Sandwich, at the Nore, the 19th day of September, 1790.

THOMAS TONKEN,	Captain
RICHARD LANE,	1st Lieutenant
Lent to the Dictator,	2d Ditto
RANCEFORD TOOKEY,	3d Ditto
Not appointed,	4th Ditto
JOHN CLARKSON,	5th Ditto
Not appointed,	6th Ditto
GEORGE TREMLETT,	Master
JOHN SMITH,	Surgeon
RICHARD RIPLEY,	Boatswain
SAMUEL PAYNE,	Carpenter.”

*Copy of a Letter from Captain GEORGE MURRAY, of
his Majesty's Ship DEFENCE, to the principal Offi-
cers and Commissioners of his Majesty's Navy.*

No. 110, Penton-Street, London,
Dec. 18, 1790.

GENTLEMEN,

INCLOSED is a report* of the method in which I caused tubes to be fitted for Mr. White's AIR MACHINE on board the Defence, which seemed to answer the end proposed as well as could be expected; and from the effects of it therein mentioned, I am of opinion the machine will be found to answer much better than the ventilators now in use on board his Majesty's Ships.

The machine and tubes still remain as they were fitted on board the Defence; and the Carpenter or Gunner of the ship understands the method of working it.

I have the Honour to be,

GENTLEMEN,

Your most humble Servant,

G. MURRAY.

The principal Officers and
Commissioners of his
Majesty's Navy.

* The Report signed by Captain G. Murray may be seen by applying to the Patentee.

AN experiment was lately made with this Machine at CLAY HILL, near ENFIELD, MIDDLESEX: where, on digging a WELL, at the depth of forty feet, the Air became so noxious, that a candle would not burn six feet from the surface: and a workman, imprudently venturing down, was suffocated. The machine being applied next morning, immediately drew off the Vapour, and the work was finished with ease, forty feet lower.

AT Messrs. Rush and Pott's, Vinegar Merchants, Castle-street, Southwark, a fifty thousand gallon vessel having become full of foetid Air, was, in a short space of time, made perfectly sweet, by filling it with fumes of brimstone conveyed by this Machine, and extracting them next morning.—The Proprietors afterward declared the vessel fifty pounds better than it had been for some years past.

PATENT AIR MACHINE,

OR

VENTILATOR.

WHEREAS WILLIAM WHITE, of *Garlick Hill*, and JOHN WHITE, of the *Minories, London*, some time since, had, at the Rooms of the *Society of Arts, Manufactures, &c.* a public trial of their respective AIR MACHINES, or VENTILATORS, before a Committee of the said Society, appointed for that purpose, in order to prove to the said Society, and the Public at large, which of the said Machines was superior in power and operation; when that invented by WILLIAM WHITE, of *Garlick Hill*, kept suspended a weight of 48lb. whilst that invented by JOHN WHITE, of the *Minories*, could not keep suspended 1lb.—The Ventilator of WM. WHITE, of *Garlick Hill*, has no valves, but draws in, and throws out, a CONTINUAL STREAM of AIR without intermission; that invented by JOHN WHITE, of the *Minories*, acts with valves, as a pair of bellows, by repeated puffs, takes more room, is less manageable, and not so convenient.

WILLIAM WHITE, therefore, cautions all persons who are owners of, or have the care of Mines,
Ships,

Ships, Hospitals, Prisons, Workhouses, Slave ships, &c. &c. to transmit their orders for WILLIAM WHITE'S PATENT AIR MACHINE, or VENTILATOR, to No. 27, *Garlick-hill*: another and inferior Machine having been too frequently imposed on the public, from the similarity of name.

WILLIAM WHITE, of *Garlick-hill*, has already fixed his Ventilator

At the HOUSE of COMMONS of ENGLAND;
 At the HOUSE of COMMONS of IRELAND;
 The CUSTOM-HOUSE, LONDON;
 The STOCK EXCHANGE;
 The EAST-INDIA-HOUSE;
 The NEW THEATRE, DRURY-LANE;
 MERCHANT TAYLOR'S SCHOOL;
 On board HIS MAJESTY'S SHIPS;
 The SHIPS of the Hon. EAST INDIA COMPANY;
 In COAL MINES;
 In WORKHOUSES, &c. &c.

WM. WHITE will readily produce, to such as require them, proper proofs and certificates of its utility and easy operation.—The above Machine will draw up any kind of Air at the rate of two miles in four minutes; and will return through the same tube, with equal velocity, Air scented with Aromatics, sulphur, &c. will render quite cold a gallon of boiling water

water in two minutes, when the Thermometer is at 72 degrees of heat; and is an excellent article of traffic to the East or West-Indies, Spain, Portugal, &c. &c.

WM. WHITE, the Patentee, received the following Letter:

“We have had a most melancholy accident happened here on Wednesday last, at a pit of Mr. Lambton's, near Picktree. Out of 31 or 32 men, 25 were buried here on Thursday, and 3 yesterday, one not yet found. Only 3 were found alive, and this moment I hear the bell bewailing the departure of 2 of them. The interring of these unfortunates was the most affecting—7 were brought shoulder height, five hearfes, and six or seven carts; in some graves 7, others 5, a father and 2 sons in one, 3 brothers in another, &c. &c. Chester-le-Street, 14th June, 1794.”

N. B. Had Wm. White's Patent Air Machine been made use of, this melancholy accident would not have happened.

Extract

*Extract from Mr. GEORGE HAMILTON'S Account
of a Voyage round the World, in His Majesty's
Frigate Pandora.—Page II.*

“The air now becoming intolerably hot, and to evacuate the foul air from below where the people slept, had recourse to Mr. White's new Ventilator, but found little benefit from it, not from any fault in the Machine, but from the crowded state of the ship, it was impossible to throw a current of air into those places where it was most wanted; but by the addition of a flexible leather tube, like a water engine, it might be rendered of the utmost importance to the service, as in tenders, press-holds, and in line of battle-ships at sea, when the lower deck ports cannot be opened; where often the jail fever, and all the calamities that attend human nature, in crowded situations, are engendered, that might be entirely obviated by Mr. White's ingenious Machine.”

